



OFFICE OF RIVER PROTECTION

P.O. Box 450, MSIN H6-60
Richland, Washington 99352

AUG 30 2013

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DEPARTMENT OF ECOLOGY
NWP - RICHLAND

13-ECD-0072

Ms. Jane A. Hedges, Program Manager
Nuclear Waste Program
Washington State
Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99354

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Ms. Hedges:

U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION RESPONSE TO
13 NWP 068 WASHINGTON STATE DEPARTMENT OF ECOLOGY (ECOLOGY) LETTER
REQUEST FOR WASTE DESIGNATION OF CONDENSATE

- References:
1. Ecology letter from J. A. Hedges to K. W. Smith, ORP, "Independent Cooling Module (ICM) Condensate," 13-NWP-068, dated June 24, 2013.
 2. ORP letter from K. W. Smith to J. A. Hedges, Ecology, "U.S. Department of Energy, Office of River Protection (ORP) Requests Review and Approval of Submittal of Criteria and Toxic Air Emissions Notice of Construction (NOC) Modification Form for AY/AZ Tank Farm Ventilation Upgrades," 13-ECD-0018, dated April 8, 2013.

This letter responds to Ecology's letter (Reference 1) requesting response to the following two questions:

1. Please tell us [Ecology] whether the condensate (condensate collected by the Independent Cooling Module [ICM]) designates as a dangerous waste under Washington Administrative Code 173-303 Washington Dangerous Waste Regulations.
2. Inform us no later than August 15, 2013, if you will modify other permits to address this activity.

The ICM is a portable skid mounted unit that is planned to be connected to two tank risers; one for inlet air and one for return air. The system will be pressure tested before operation to ensure there is no pathway for tank headspace air to escape. The ICM will take warm tank headspace air and cool it and then return it to the tank along with condensate collected in the condenser. The ICM at this time is primarily planned for use during mixer pump operations to remove heat generated from the mixer pumps. As the ICM is not part of the air abatement system, it does not directly impact the modifications described in Reference 2 regarding AY/AZ Tank Farm Ventilation Upgrade.

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Based on past sample analysis of Ventilation System AZ-702 generated condensate and process knowledge, it is not anticipated that the resulting condensate from the ICM would designate as a dangerous waste under WAC 173-303. As a result of funding priorities, installation of the ICM has been deferred several years. However, prior to operation, waste designation of the condensate that will be produced by the ICM will be completed to ensure proper management. With construction and installation of the ICM being deferred, no additional permit modifications other than those described in Reference 2 are anticipated at this time.

The ICM is a closed-loop unit functioning separately from the air abatement system for the AY/AZ ventilation system that may be used to assist in controlling tank headspace temperature, if necessary, during waste transfer operations including mixer pump activity. The ICM, when operated, will remove uncontained gases from the tank headspace, cooling the gases which will result in condensates being collected that ultimately will be returned to the Double-Shell Tank. As gases in the tank headspace are considered "uncontained gases" Listed Waste F-Codes do not attach to the generated condensate and the condensate must be sampled and analyzed for Characteristic and State Criteria waste designation. When the condensates are formed from the uncontained gas being cooled, the condensate constitutes a new point of generation of a solid waste subject to waste designation. As this waste stream will not be generated from the ICM in the near future, no determinations have been made regarding its designation as a dangerous waste at this time. Past sample analysis of Ventilation System AZ-702 generated condensate indicated the condensate would not designate as a dangerous waste under WAC 173-303. Additional analysis of the 702-AZ condensate will be conducted prior to construction of the ICM for waste designation purposes.

If you have any questions, please contact Dennis W. Bowser, Environmental Compliance Division, (509) 373-2566.



Kevin W. Smith
Manager

ECD:DWB

cc: See page 3

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cc: B. G. Erlandson, BNI
J. A. Bates, CHPRC
J. Cox, CTUIR
S. Harris, CTUIR
K. A. Conaway, Ecology
S. L. Dahl, Ecology
S. L. Derrick, Ecology
P. M. Gent, Ecology
D. Zhen, EPA (Region 10, Seattle)
R. H. Anderson, MSA
T. G. Beam, MSA
K. A. Peterson, MSA
P. C. Miller, North Wind
G. Bohnie, NPT
K. Niles, Oregon Energy
D. E. Jackson, RL
J. Martell, WDOH
L. L. Penn, WRPS
B. P. Rumburg, WRPS
R. Jim, YN
Administrative Record
BNI Correspondence
Environmental Portal, LMSI
WRPS Correspondence